



FMI PRODUCTS, LLC

# (C)TRC THERMOSTAT REMOTE CONTROL FOR USE IN FMI PRODUCTS, LLC MANUFACTURED "REMOTE READY" GAS HEARTH PRODUCTS

The remote operated on a 4-AAA 1.5 volt batteries (included).

It is recommended that alkaline batteries always be used for longer battery life and maximum operational performance.

Before using the remote control, install the 2-AAA batteries into the battery compartment. Use Caution that batteries are installed in the proper direction.

## REMOTE OPERATION

### SETTING °F / °C SCALE

The factory setting for temperature is °F. To change this setting to °C, first

- Press the ON key and the OFF key on the transmitter at the same time this will change from °F to °C. Follow this same procedure to change from °C back to °F.

### Manual Function

To operate the system in the manual "MODE" do the following.

#### ON OPERATION

Press the ON key. The appliance flame will come on. During this time the LCD screen will show ON, after 3 seconds the LCD screen will default to display room temperature and the word TEMP will show. (Flame icon will appear on LCD screen in on mode)

#### OFF OPERATION

Press the OFF key. The appliance flame will shut off. During this time the LCD screen will show OF, after 3 seconds the LCD screen will default to display room temperature and the word "TEMP" will also show on the screen.

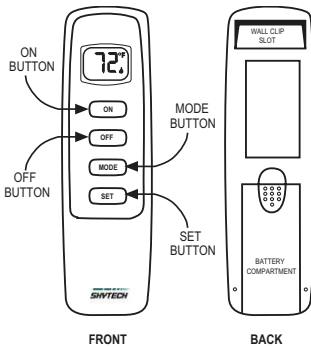
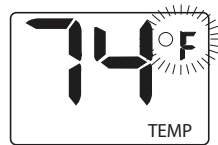
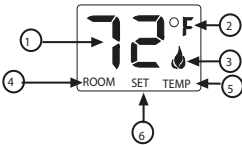


Figure 1: Remote Control

- ON ← 1 Manual ON
- OFF ← 2 Manual OFF
- MODE ← 3 Changes unit from manual mode to thermo mode.
- SET ← 4 Sets the timer in minutes



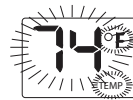
SCREEN WHILE DEPRESSING ON KEY



SCREEN AFTER 3 SECOND DEFAULT



SCREEN WHILE DEPRESSING OFF KEY



SCREEN AFTER 3 SECOND DEFAULT

1. DISPLAY - Indicates CURRENT room temperature
2. °F or °C - Indicates degrees Fahrenheit or Celsius
3. FLAME - Indicates burner/valve in operation
4. ROOM - Indicates remote is in THERMO operation
5. TEMP - Appears during manual operation
6. SET - Appears while setting the desired temperature in the thermo operation.

## THERMOSTAT FUNCTION

### SETTING DESIRED ROOM TEMPERATURE

This remote control system can be thermostatically controlled when the transmitter is in the THERMO mode (The word ROOM must be displayed on the screen). To set the THERMO MODE and DESIRED room temperature, Press the MODE key until the LCD screen shows the word ROOM, then the remote is in the thermostatic mode. Press and hold the SET key until the desired set temperature is reached. (By pressing and holding the set key the LCD screen set numbers will increase from 45 to 99 then restart over at 45) Next release the SET key. The LCD screen will display the set temperature for 3 seconds and the LCD screen will flash the set temperature for 3 seconds, then the LCD screen will default to display the room temperature.

### TO CHANGE THE SET TEMPERATURE

Press and hold the SET key until the desired set temperature is reached. (By pressing and holding the set key the LCD screen set numbers will increase from 45 to 99 then restart over at 45) Next release the SET key. The LCD screen will display the set temperature for 3 seconds, then will flash the set temperature for 3 seconds, then the LCD screen will default to display the room temperature. Press the MODE key to disengage the thermo mode. The word ROOM on the LCD screen will not show when the thermo is not in operation.

NOTE: The highest SET temperature is 99°F (32°C) and the lowest temperature is 45°F (60°C).



THERMO SET



THERMO MODE



THERMO ON



THERMO OFF

The Thermo Feature on the transmitter operates the appliance whenever the ROOM TEMPERATURE varies a certain number of degrees from the SET TEMPERATURE. This variation is called the "SWING" or TEMPERATURE DIFFERENTIAL. The normal operating

cycle of an appliance may be 2-4 times per hour depending on how well the room or home is insulated from the cold or drafts. The factory setting for the "swing number" is 2. This represents a temperature variation of +/- 20 °F (10 °C) between SET temperature and ROOM temperature, which determines when the fireplace will be activated. This function is pre-set at the factory.

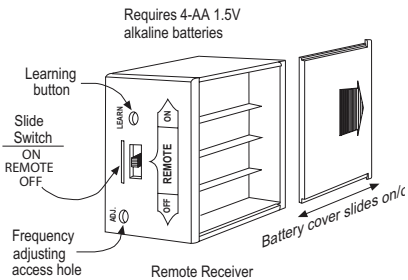
The transmitter has ON and OFF manual functions that are activated by pressing either button on the face of the transmitter. When a button on the transmitter is pressed the word ON or OF will appear on the LCD screen to show while the signal is being sent. Upon initial use, there may be a delay of three seconds before the remote receiver will respond to the transmitter. This is part of the system's design.

## RECEIVER

The remote receiver operates on 4 AA-size 1.5 volt batteries. IMPORTANT: New or fully charged batteries are essential for proper operation of the remote receiver.

The remote receiver houses the microprocessor that responds to commands from the transmitter to control system operation. The receiver has a 3-position slide switch for selecting the MODE of operation: ON/REMOTE/OFF.

- With the slide switch in the ON position (toward the LEARN button), the system will remain on until the slide switch is placed in the OFF or REMOTE position.
- With the slide switch in the REMOTE position (centered), the system will only operate if the remote receiver receives commands from the remote control.
- With the slide switch in the OFF position (away from the LEARN button), the system is off.
- It is suggested that the slide switch be placed in the OFF position if you will be away from the home for an extended period of time. If the remote receiver is mounted out of the reach of children, place the slide switch in the OFF position also functions as a safety "lock-out" by both turning the system off and rendering the remote receiver inoperative.



**Figure 2: Remote Receiver**

**⚠ WARNING: This remote control system must be installed exactly as outlined in these instructions. Read all instructions completely before attempting installation. Follow instructions carefully during installation. Any modifications of the remote control or any of its components will void the warranty and may cause a fire hazard.**

**Do not connect any gas valve or electronic module directly to 110-120VAC power. Consult gas appliance manufacturer's instructions and wiring diagram for proper placement of all wires. All electronic modules are to be wired to the manufacturer's specifications. Improper installation of electrical components can cause damage to electronic module, gas valve and remote receiver.**

**INSTALLATION**

The remote receiver can be either wall-mounted in a standard plastic switch box or placed on or near the fireplace hearth. Preferably, the remote receiver should be wall-mounted in a plastic switch box, as this will protect its electrical components from both the heat produced by the gas appliance and potential damage or abuse that can occur if it is left exposed on the hearth. PROTECTION FROM

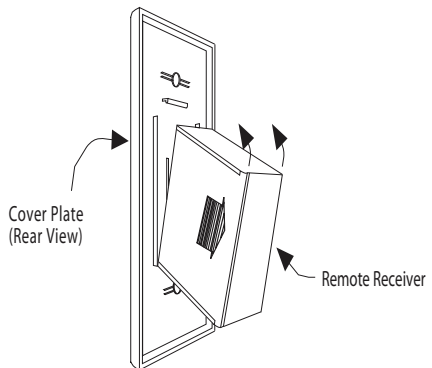
EXTREME HEAT IS VERY IMPORTANT. Like any piece of electronic equipment, the remote receiver should be kept away from temperatures exceeding 130°F inside the receiver case. Battery life is also significantly shortened if batteries are exposed to high temperatures.

Make sure the remote receiver switch is in the OFF position. It is recommended that 18 gage solid or stranded wires with no splices and measuring no longer than 20 feet (not included) be used to make connections between the terminal bloc on the millivolt gas valve or electronic module and the wire terminals on the remote receiver for wall-mount installation.

**Wall mounting**

Install 4 AA-size alkaline batteries in the remote receiver. For best performance, remote receiver batteries should be factory fresh when installed. Very little battery power is required to operate the remote receiver, the electronics are tuned to operate best when battery output is greater than 5.3 volts. Four new batteries should provide an output voltage of 6.0 to 6.2 Volts. **Be sure batteries are installed with the (+) and (-) ends facing the correct directions.**

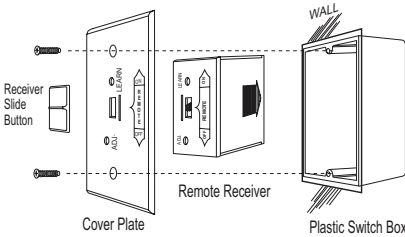
To attached cover plate to receiver box, position the receiver as shown in Figure 3 to the left with the lower tab on cover plate inserted into groove of receiver. Make sure ADJ hole and LEARN hole on cover plate align properly with remote receiver. Pull receiver up and snap into top tab of cover plate.



**Figure 3: Mounting Receiver on Switch Plate**

Position the cover plate so the word ON is facing up, then, install the remote receiver into the plastic switch box using the two long screws provided. Push the white button over the receiver slide switch only after making sure the remote receiver has "Learned" the transmitter's security code (see *Matching Security Codes*).

NOTE: The remote receiver will only respond to the transmitter when the 3-position slide button is in the REMOTE position. If the system does not respond to the battery transmitter on initial use, see *Matching Security Codes*, and recheck battery positions in the remote receiver.



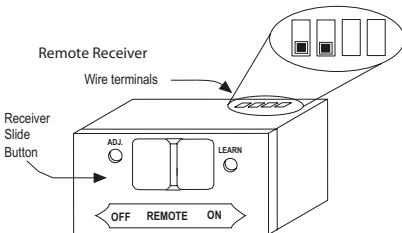
**Figure 4: Mounting Receiver in Switch Box**

**Hearth Mount**

The remote receiver can be placed on the fireplace hearth or under the fireplace, behind the control access panel. Position where the ambient temperature inside the receiver case does not exceed 130°F. NOTE: Black slide button is used for hearth mount applications.

**WIRING INSTRUCTIONS**

A qualified electrician or gas technician who is familiar with the gas appliance and gas valves that will be operated by the remote should install the remote control system. Incorrect wiring connections will cause damage to the gas valve or electronic module operating the gas appliance and may damage the receiver.



**Figure 5: Remote Receiver**

**Millivolt Valves**

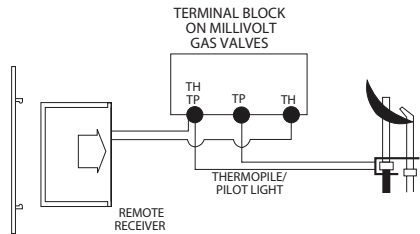
The remote receiver is connected to the millivolt valve using the TH and THTP (thermostat) terminals on the terminal block on the gas valve. Before connecting wires to the valve, check to see if an individual short "jumper" wire is connected to the TH and THTP terminals. Some valves have two sets of terminals with connections on both the front and back of the terminal block. Check both sides of the terminal block and remove any individual wire connecting the TH and THTP terminals to each other. Connect wires from the remote receiver to the gas valve.

Operation of the remote receiver is similar to that of a thermostat in that both turn the gas valve on and off based on input signals. A thermostat's input signals are different temperatures. The remote receiver's input signal comes from the transmitter.

Connect each of the two wires leading from the TH terminals on the millivolt gas valve to either of the two wire terminals on the remote receiver. Normally it does not matter which wire goes to which terminal.

**Electronic Spark Ignitions**

The remote control receiver can be connected, in series, to a 24VAC transformer to the TR (transformer) terminal on the electronic module. Connect the hot wire from the 24VAC transformer to either of the wire terminals on the remote receiver. Connect another wire (not included) between the other receiver wire terminal and the TH (thermostat) terminal on the electronic module.



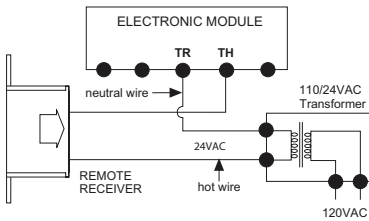
**Figure 6: Millivolt Wiring Diagram**

## OPERATION

### MILLIVOLT VALVES

Light your gas appliance following the lighting instructions that came with your appliance. Confirm that the pilot flame is on; it must be in operation for the main gas valve to operate.

- Slide the 3-position button on the remote receiver to the ON position. The main gas flame should ignite.



**Figure 7: Electronic Wiring Diagram**

- Slide the button to OFF. The flame should extinguish (the pilot flame will remain on).
- Slide the button to REMOTE (the center position), then press the ON button on the remote control to change the system to ON. The main gas flame should ignite.

### Electronic Spark Ignitions

- Slide the 3-position button on the remote receiver to the ON position. The spark electrode should begin sparking to ignite the pilot (the pilot may ignite after only one spark). After the pilot flame is lit, the main gas valve should open and the main gas flame should ignite.
- Slide the button to OFF. The main gas flame and pilot flame should both extinguish.
- Slide the button to REMOTE (the center position), then press the ON button on the remote control to change the system to ON. The spark electrode should begin to ignite the pilot. After the pilot is lit, the main gas valve should be open and the main gas flame should ignite.

## MATCHING SECURITY CODES

Each remote control can use one of 65,536 unique security codes. It may be necessary to program the remote receiver to "LEARN" the security code of the remote control upon initial use, if batteries are replaced or if a replacement remote control is purchased from your dealer. When matching security codes, be sure the slide button on the receiver is in the REMOTE position; the code will not "LEARN". If the slide switch is in the ON or OFF position. Program the remote receiver to "LEARN" a new security code by pushing the LEARN button on the top of the remote receiver and then pressing the MODE button on the remote control. A change in the beeping pattern, at the receiver, indicates the remote control's code has been programmed into the receiver. When an existing receiver is matched to a new remote control, the new security code will override the old one.

The microprocessor that controls the security code matching procedure is controlled by a timing function. If you are unsuccessful in matching the security code on the first attempt, wait 1-2 minutes before trying again. This delay allows the microprocessor to reset its timer circuitry and try up to two or three more times.

## BATTERY LIFE

Life expectancy of the alkaline batteries in the remote control should be at least 12 months. Check and replace all batteries annually. When the remote control no longer operates the remote receiver from a distance it did previously or the remote receiver does not function at all, the batteries should be checked. It is important that the remote receiver batteries are fully charged and provide continuous output voltage of at least 5.3 Volts. The length of the wire, the more battery power is required to deliver signals between the remote receiver and the gas valve. Recommended length is no longer than 20 feet. The remote control should operate with as little as 9.0 Volts battery power.

## TROUBLESHOOTING

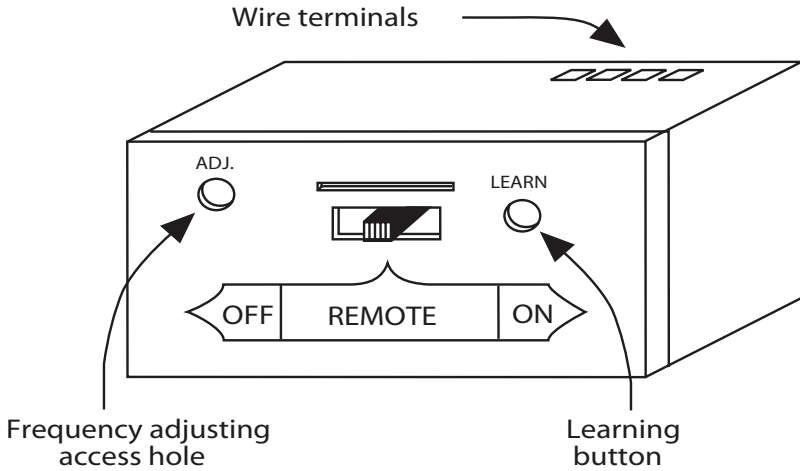
If you encounter problems with your fireplace system, the problem may be with the fireplace itself or it could be with the remote control. Review the fireplace manufacturer's operation manual to make sure all connections are properly made. Then check the operation of the remote in the following manner:

- Make sure the batteries are correctly installed in the receiver. One reversed battery will keep the receiver from operating properly.
- Check batter in remote control to make sure contacts are touching (+) and (-) ends of battery. Bend metal contacts in for tighter fit.
- Be sure receiver and remote control are within 20 to 25 feet operating range.
- Keep receiver from temperatures exceeding 130°F. Battery life is shortened about this level.
- If receiver is installed in tightly enclosed metal surround, the operating distance will shorten.

## ADJUSTMENTS

- To adjust at the receiver, use a small slotted screwdriver. Turn the adjustment screw counter-clockwise about 5 degrees or a maximum of 1/8 turn. This should correct the distance problem.
- If the problem is not corrected, return adjustment screw to original position and then turn adjustment screw clockwise.
- This adjustment is like turning your radio dial. If you keep turning the adjustment screw, in either direction, you will go past the proper setting (tuning).

## Remote Receiver



**Figure 8: Adjusting the Receiver**



  
**FMI PRODUCTS, LLC**  
2701 S. Harbor Blvd.  
Santa Ana, CA 92704  
1-866-328-4537  
**[www.fmiproducts.com](http://www.fmiproducts.com)**

125272-01  
Rev. B  
01/11